

**2005 Annual Report to the Legislature
and the California Integrated Waste Management Board**
Senate Bill 876
Waste and Used Tires

Purpose

This report was prepared in accordance with Section 20 of Chapter 838, Statutes of 1999 (Senate Bill (SB) 876, Escutia), which amends and adds numerous sections to the Public Resources Code, including Section 42889.3, which states:

On or before January 1 of each year, the Department of Transportation shall report to the Legislature and the board on the use of waste tires in transportation and civil engineering projects during the previous five years, including, but not limited to, the approximate number of tires used every year, and the types and location of these projects.

Background

According to the California Integrated Waste Management Board (Board), California generated 39 million waste tires in 2003. Of these tires, roughly 28.5 million were diverted from landfills through recycling, reusing, retreading, and as tire-derived fuel. For the approximate 10.5 million tires that do not have an established secondary use, the expansion of the existing markets for waste tire usage such as rubberized asphalt concrete, playground mats or other surfacing, civil engineering applications, and tire-derived fuels will assist in addressing potential tire stock pile issues and their associated environmental impacts.

Department's Efforts

The California Department of Transportation (Department) has established a variety of uses for recycled content tire products for civil engineering applications in transportation projects. The Department is committed to helping reduce the number of waste tires entering California's landfills by aggressively pursuing innovative uses for these tires. Although Rubberized Asphalt Concrete (RAC) is viewed by many as the main avenue to aid in this effort, the Department is additionally pursuing other uses that can potentially consume larger quantities of waste tires. Shredded waste tires, also known as Tire-Derived Aggregate (TDA), use large quantities of waste tires when installed as lightweight fill in the Department's engineering applications.

The Department uses RAC as an alternative to conventional asphalt concrete that incorporates crumb rubber generated from waste tires. A list of the Department's

RAC projects is included in Appendix 1. The Department has seen a steady increase in RAC usage in recent years. This increase is attributed to the continued promotion of RAC, the establishment of the internal Department goal of 15 percent RAC usage, and to the development of the Asphalt Rubber Usage Guide. To further the Department's commitment to use RAC, a memo was issued this year to all District Directors identifying RAC as the strategy of choice when evaluating flexible pavement alternatives for projects. In addition, the Department, in partnership with the Board, will continue efforts with California's resource agencies in establishing the appropriate requirements and compliance with regard to air emission standards for RAC plants in those regions that currently prohibit them.

Waste Tires Used in Department of Transportation Projects					
Year	Number of Tires Used in RAC Projects¹	Number of Tires Used as TDF⁴	Number of Tires Used as TDA¹	Number of Tires Used in Other Applications^{1,7}	Totals
2001	1,733,380 ²	126,000	660,000 ⁵		2,519,380
2002	703,953	150,000			853,953
2003	1,126,515	50,000	75,000 ⁶		1,251,515
2004	1,788,945	110,000		100,997	1,999,942
2005	2,000,000 ³	110,000		181,914	2,291,914
Subtotal	7,352,793	546,000	735,000	282,911	8,916,704

¹ Based on projects listed in Appendix 1. Formula for conversion of RAC tonnage to number of waste tires consumed has been revised from 1.85 tires/RAC tonne to 2.72 tires/RAC tonne, to become consistent with the Board's use of an average 20 pound passenger car waste tire generating 12 pounds of crumb rubber.

² This larger RAC usage is reflective in a special allocation of funds by the California Transportation Commission to the Department to expedite much needed roadway rehabilitation work. This additional work consisted of all types of pavement rehabilitation including, but not limited to, the placement of concrete pavement, conventional asphalt concrete pavement, and RAC.

³ Actual quantity through third quarter is 1,876,918 tires with an estimated amount of 2,000,000 tires projected through the end of the calendar year.

⁴ Based on the Board's California Waste Tire Generation, Diversion, and Disposal, 1990 – 2002 & 2003 summary, which states the total number of tires used as Tire Derived Fuel (TDF) in cement kilns in California is as follows: 2001 - 4.2 million tires; 2002 – 5.0 million tires; 2003 – 5.8 million tires; and 2004 and 2005 – 5.8 million tires (projected). These values were then multiplied by the Department's 3 percent share of the market in years 2001 and 2002, 1 percent share of the market in year 2003, and 1.9 percent (projected) share of the market in years 2004 and 2005 to determine the number of tires used as TDF.

⁵ This amount represents one pilot project, which utilized a new and innovative use of TDA as lightweight material for embankment fill. If this installation continues to perform as anticipated, proving that this is a good engineering use of tires, then this experimental application can be adopted as a standard tool. Additional pilot projects are being aggressively pursued.

⁶ Similar to footnote 5, this is another experimental use of TDA as fill behind a retaining wall.

⁷ Other applications include 141,914 waste tires used in asphalt rubber-binder material for chip seal projects, and 40,000 waste tires used in rubber mats for weed control.

It has come to the Department's attention that previous assumptions used to formulate the conversion of RAC tonnage, to the number of waste tires consumed, was overly conservative. With the concurrence of the Board's staff, the Department has revised the conversion rate from 1.85 waste tires consumed per tonne of RAC to 2.72 waste tires consumed per tonne of RAC. This conversion rate is now consistent with the Board's use of 12 pounds of crumb rubber generated from an average 20-pound passenger car waste tire.

The Department has worked in partnership with the Board on projects that promote the innovative use of shredded waste tires in highway construction. In 2001, the Department constructed an embankment made of TDA on the Dixon Landing Project in Santa Clara County. In 2003, the Department piloted the use of TDA as backfill material behind a retaining wall on State Route 91 in Riverside County. This retaining wall section was 260 feet in length and utilized approximately 75,000 shredded tires. The pilot allowed the Department to perform a full-scale test of a lightweight TDA installation to measure the anticipated reduced lateral pressure on the retaining wall. If expectations are realized, the reduction in retaining wall pressures with the use of the lightweight TDA backfill material may allow for a significant reduction in the retaining wall mass in future designs, ultimately reducing costs for retaining walls. A similar installation of lightweight backfill using TDA has been designed for another retaining wall in Riverside County near the junction of State Routes 60, 91, and 215. Construction for this retaining wall is anticipated to begin in 2006 and is estimated to use 250,000 tires.

To further promote the use of tire shreds within the Department, a memo was issued this year to all District Directors suggesting that TDA be considered as a first option when lightweight fills are required for projects. The Board has also provided the Department with access to industry experts in the area of TDA to supplement education to the Department's technical staff on potential applications of TDA.

In addition to RAC and TDA, the use of tires as a fuel supplement in cement kilns and cogeneration facilities constitutes a large market for waste tires. For example, of the estimated 39 million waste tires generated in California in 2003, approximately six million were used as Tire Derived Fuel (TDF) in various cement kilns in California. These kilns produce cement that is used to create the concrete the Department uses in many of its construction projects.

Other transportation applications that incorporate waste tires include rubber mats and asphalt rubber binder material used in chip seals. Asphalt rubber chip seal projects are used to correct surface deficiencies and to seal and protect the pavement against the intrusion of surface water. The Department also installed

pilot projects that utilize rubber mats underneath guardrails as a method of vegetation control. One project in San Joaquin County placed manufactured rubber mats under guardrail, utilizing crumb rubber from 21,000 waste tires. Another 19,000 waste tires were used in a different application method, where small rubber pieces ground from waste tires were blended with binder material and sprayed around in-place guardrail. This process was used in 12 projects located throughout the state. These pilot applications show promise as a durable remedy to address the Department's historic maintenance issue of weed control to suppress fire risk, while reducing herbicide usage and the exposure of maintenance staff to traffic.

Recently, the Department and the Board entered into an interagency agreement allowing the Department to conduct further research to look for opportunities to broaden the use of RAC in the Department's projects. This research will help to identify cost-effective applications for RAC, evaluate the feasibility of recycling reclaimed RAC into newly placed pavement and for product deployment through statewide training and partnering with industry.

The Department's early use of RAC was marred by inconsistent performance, which has since been addressed. Periodic reductions in program funding have also restricted the Department's ability to construct all of the necessary improvements for both new highway construction and for the maintenance and rehabilitation of the existing facilities fully utilizing RAC opportunities. The Department's recent focuses on using RAC and TDA as strategies of choice show promise in exceeding the Department's internal goals for waste tire usage. Appendix 2 charts the use of the various pavement types constructed by the Department each year by weight. Appendix 3 shows the percent usage of RAC when compared to all flexible pavement strategies. This chart shows a marked increase in RAC usage over the past two years, exceeding all previous records.

Summary

The Department continues to help reduce the number of waste tires entering California's landfills. The Department has promoted the use of rubberized asphalt concrete as a roadway pavement strategy and is continually looking for new or innovative uses of recycled waste tires for transportation projects.

The Department's use of RAC is largely dependent upon the available funding in the State Highway Operational Protection Plan (SHOPP) for pavement projects. With the recent influx of funding, the Department anticipates the construction of additional Highway Maintenance and SHOPP Projects, which should include a significant number of RAC projects.

It should also be noted that there has been a substantial investment of State and Federal funds on local roads. Some of these investments are the local share of the State Transportation Improvement Program (STIP), congestion relief programs, and gas tax revenue. Although the Department cannot accurately quantify the use of RAC on local roads, it is a pavement strategy currently used by many local agencies.

The Department is dedicated to the stewardship of natural resources and will continue to look for opportunities for innovative uses of recycled products in transportation projects.

Appendix 1

CONTRACT DIST/COR/TE/PM	B.O. DATE	ITEM DESCRIPTION	ITEM CODE	PROGRAM	TONNES	TIRES
1 03-2A8604	03-Aug-01	RAC (TYPE G)			6,283	
2 03-4416U4	03-Aug-01	RAC (TYPE G)			3,180	8,650
3 03-4416U4	30-Jan-01	RAC (TYPE O)			42,700	116,144
4 04-045024	30-Jan-01	RAC (TYPE G)			320	870
5 04-0C7014	23-May-01	RAC (TYPE G)			121,000	329,120
6 04-0C7024	23-Jun-01	RAC (TYPE G)			134,000	364,480
7 04-0T0504	04-Apr-01	RAC (TYPE G)			7,540	20,509
8 04-135994	04-Dec-01	RAC (TYPE O-HB)			10,300	28,016
9 04-1R7504	10-Apr-01	RAC (TYPE O)			5,000	13,600
10 04-253714	11-Apr-01	RAC (TYPE G)			5,000	13,600
11 04-2F0104	20-Jun-01	RAC (TYPE G)			3,290	8,949
12 05-0A4404	05-SLO-46-R0.2/R17.4	04-SM-280-R0.0/R9.0			31,600	85,952
13 05-0E7204	05-SLO-41-18.4/25.3	04-Ala-238-20.3/23.0			5,200	14,144
14 05-486704	05-SLO-46-R17.4/R34.9	04-SCI-Ala-680-M11.9/M15.9/M0.0/R18.5			18,400	50,048
15 06-453604	06-Kin-Fre-33.198-12.9/20.1.1.9.8/33.9	04-Ala-84-32.8/37.3			10,300	28,016
16 07-182804	07-Ven-01	RAC (TYPE G)			19,900	54,128
17 07-1Y0304	07-LA-5-94.7/96.2	RAC (TYPE G)			1,610	4,379
18 07-1Y0304	07-LA-30-R0.0/R3.8	RAC (TYPE G)			1,840	5,005
19 07-1Y1704	07-LA-138-25.8/33.8	RAC (TYPE G)			33,160	90,195
20 07-1Y1904	07-LA-170.5-R24.5/R32.8,55.6/56.2	RAC (TYPE G)			1,410	3,835
21 07-202604	07-LA-101-43.8/51.8	RAC (TYPE G)			6,130	16,674
22 07-207704	07-Ven-1-32.8/33.4	RAC (TYPE G)			172	468
23 07-207804	07-LA-5-25.3/29.3	RAC (TYPE G)			700	1,904
24 07-208204	07-LA-405-21.4/37.4	RAC (TYPE G)			4,430	12,050
25 07-4F9604	07-LA-1-07.3/6/4.8	RAC (TYPE G)			2,810	7,643
26 074G8904	07-LA-1-40.5/43.9	RAC (TYPE G)			5,170	14,062
27 08-000314	08-SBd-83-10.3/15.3	RAC (TYPE G)			16,000	43,520
28 08-0A2504	08-SBd-95.247-Var	RAC (TYPE G)			23,540	64,029
29 08-436304	08-Riv-91-9.2-11.5	RAC (TYPE G)			1,170	3,182
30 10-0A5004	10-SJ-26-3.1/3.8	RAC (TYPE G)			770	2,094
31 10-0A6504	10-SJ-99-28.4/28.8	RAC (TYPE G)			860	2,339
32 10-0E2704	10-SJ, Sta.4,99-Var	RAC (TYPE G)			3,860	10,499
33 10-3404U4	10-Tuo-108-R3.0/7.4	RAC (TYPE G)			6,580	17,898
34 11-073404	11-SD-15-M32.3/M34.1	RAC (TYPE G)			12,100	32,912
35 11-077204	11-SD-15, 54-0.9/3.7, 4.0/8.5	RAC (TYPE G)			490	1,383
36 11-178504	11-SD-78-57.1/60.0	RAC (TYPE G)			6,550	17,816
37 11-185944	11-SD-57-78-R81.8/R82.4, 0.0/1.1	RAC (TYPE G)			2,220	6,038
38 11-237104	11-Imp-86-11.8/15.8	RAC (TYPE G)			4,300	11,696
39 11-241114	11-SD-75/282-R31.5/R33.0.0/1.1	RAC (TYPE G)			4,700	12,784
40 11-241124	11-SD-905.905-11.6-19.8,22.5,7.1,8.7	RAC (TYPE G)			4,710	12,811
41 11-241134	11-SD-15-M34.9/75.3	RAC (TYPE G)			2,680	7,290

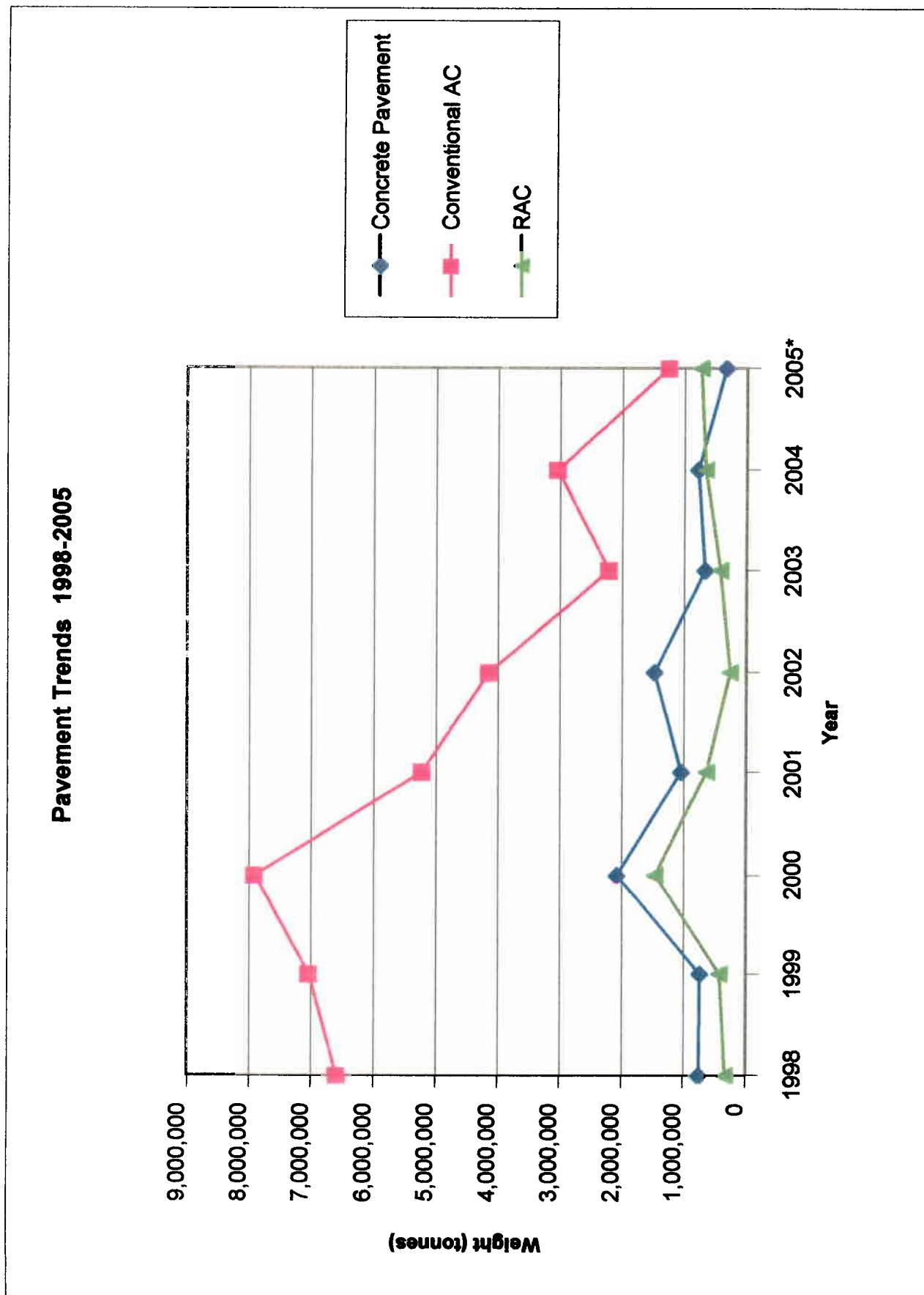
CONTRACT DIST/COR/RTE/PW	B.O. DATE	ITEM DESCRIPTION	ITEM CODE	PROGRAM	TONNES	TIRES
42 12-0850U4	12-Ora-5-22-10.9,11.9,R1.0/R21.2	12-Jul-01	RAC (TYPE G)		470	1,278
43 12-085614	12-Ora-55-R12.3/20.4	07-Jun-01	RAC (TYPE G)		21,000	57,120
44 12-085624	12-Ora-55-20.5/28.0	24-May-01	RAC (TYPE G)		39,300	106,896
45 12-040004	12-Ora-1-26-2/29.6	29-Mar-01	RAC (TYPE G)		8,500	23,120
			TOTAL	637,272	1,733,380	
1 03-1C8104	03-Pla,Yol,Sac-5,50,51,80-Var	01-May-02	RAC (TYPE O)		2,400	6,528
2 03-2C5704	03-Nev,Sie-80-45-2/51.1, 0/0/2.6	24-Jul-02	RAC (TYPE G)		29,100	79,152
3 03-3546U4	03-Sac,Pla-80,51,244-M14.6/28.9,0/0/1,1,13.7,0.2	09-Apr-02	RAC (TYPE G)		5,795	15,762
4 03-3546U4	03-Sac,Pla-80,51,244-M14.6/28.9,0/0/1,1,13.7,0.2	09-Apr-02	RAC (TYPE O)		16,400	44,608
5 06-465104	06-Tul-65-35-2/47.6	26-Feb-02	RAC (TYPE O-HB) (WARRANTY)		12,200	33,184
6 06-474904	06-Fre-168-19.6/29.9, T41.0/T52.9	30-Oct-02	RAC (TYPE G)		13,400	36,448
7 06-478004	06-Ker-46-82.4/93.0	22-Oct-02	RAC (TYPE O)		7,720	20,998
8 07-105484	07-Ven-150-24.4/38.6	30-May-02	RAC (WARRANTY)		21,800	59,296
9 07-142204	07-LA-72-0/11.0	13-Jun-02	RAC (TYPE G)		21,600	58,752
10 07-181604	07-LA-91-R22.5/R33.4	01-Aug-02	RAC (TYPE G)		270	734
11 07-189704	07-LA-170-16.2/17.4	10-Jan-02	RAC (TYPE G)		1,830	4,978
12 07-1Y1604	07-LA-118-R12.1/R13.4	07-Nov-02	RAC (TYPE G)		2,140	5,821
13 07-1Y2904	07-LA-110-32.2/35.6	06-Jun-02	RAC (TYPE G)		70	190
14 07-4H4304	07-LA-10S-40.0/41.0	21-Mar-02	RAC (TYPE G)		1,100	2,992
15 08-1A6104	08-Riv-10-R215.7/R231.9	22-Aug-02	RAC (TYPE G)		35,300	96,016
16 08-42B164	08-Riv-86/111/195-3.8/27.8,29.6/40.2,0,3/10.6	25-Jul-02	RAC (TYPE G)		41,400	112,608
17 08-334834	08-Riv-60,91-18.9/19.2	01-Nov-02	SHREDDED TIRES RET. WALL			75,000
18 10-0G6504	10-Mer-33,140-R0/0/R9.0,0/3/18.9	23-Apr-02	RAC (TYPE O)		2,260	6,147
19 10-0H7304	10-Ama,Mer-49, 99-23.7/28.3, 0.0/3.9	26-Mar-02	RAC (TYPE O)		5,200	14,144
20 12-029824	12-Ora-405-18.2/27.4	21-Feb-02	RAC (TYPE G)		6,920	18,822
21 12-094104	12-Ora-57-18.1/36.3	21-Feb-02	RAC (TYPE G)		18,500	50,320
22 12-0E5804	12-Ora-90-3.6	21-Nov-02	RAC (TYPE G)		1	3
23 12-1072U4	12-Ora-133-6.7/13.0	07-Nov-02	RAC (TYPE G)		13,400	36,448
			TOTAL	258,806	778,953	
1 02-255504	02-Las-395-19.0/39.9	09-Apr-03	RAC (WARRANTY)		23,616	64,236
2 04-1R9404	04-Ala-61-30.1/31.9	20-May-03	RAC (TYPE G)		2,100	5,712
3 04-2285U4	04-CC-680-25.1/39.1	21-Feb-03	RAC (TYPE G)		31,900	86,768
4 04-229014	04-CC-4-35.4/38.9	14-Nov-03	RAC (TYPE G)		6,730	18,306
5 04-272614	04-Ala-84-29.5/32.8, 36.7/38.0	23-Oct-03	RAC (TYPE G)		5,800	15,776

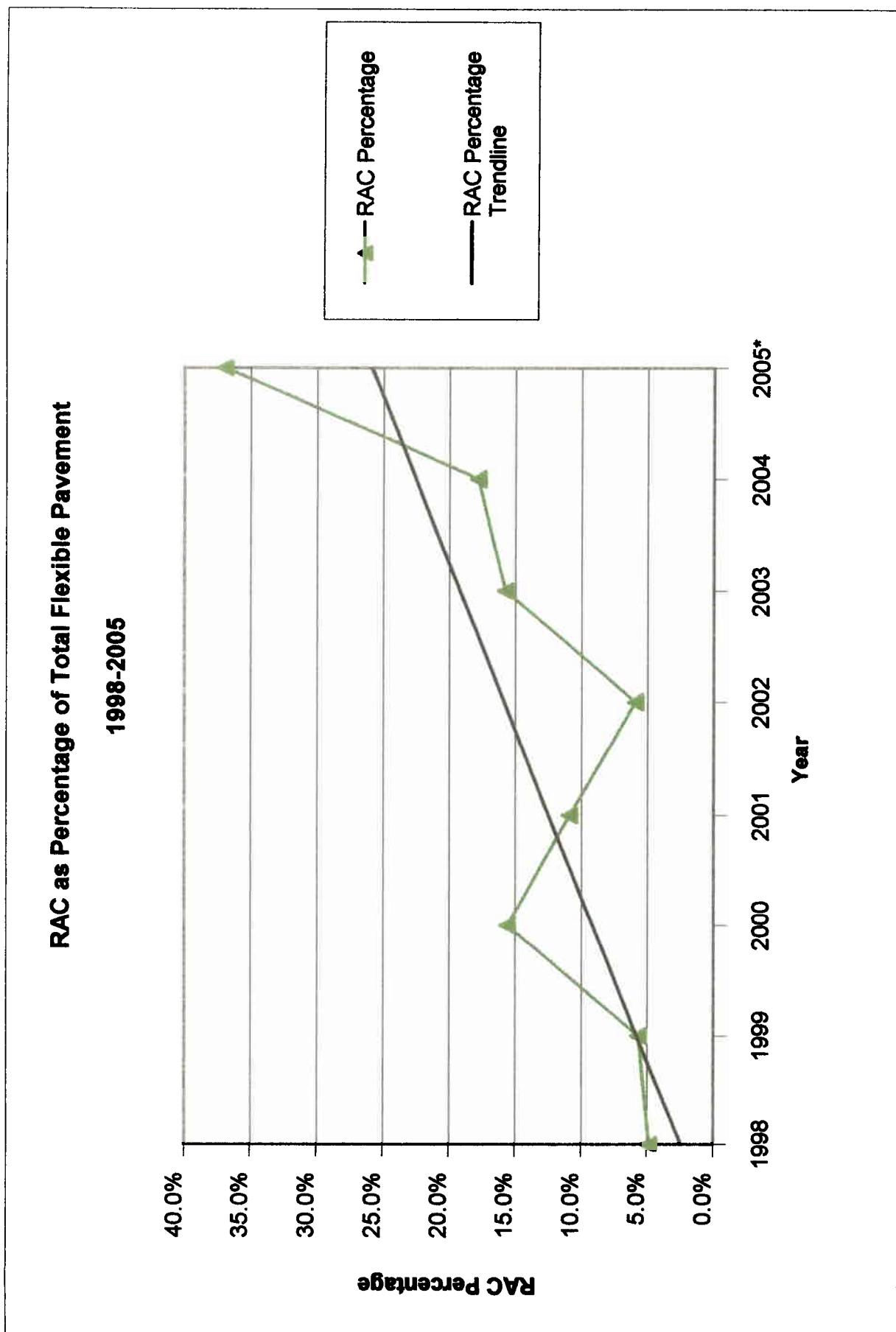
CONTRACT DIST/CORTE/PM	AWARD DATE	ITEM DESCRIPTION	ITEM CODE	PROGRAM	TONNES	TIRES
6 06-3885504	06-Feb-33-111.8/1/33.7	RAC (TYPE G)	19-Sep-03	RAC (TYPE G)	4,860	13,219
7 06-398104	06-Feb-269-0/0/20.5	RAC (TYPE G)	03-Oct-03	RAC (TYPE G)	33,200	90,304
8 06-445204	06-Feb-198-5.3/19.8	RAC (TYPE O)	05-Jun-03	RAC (TYPE O)	6,170	16,782
9 06-492704	06-Mar-41-5.2/11.2	RAC (TYPE O)	24-Sep-03	RAC (TYPE O)	4,960	13,491
10 07-1257U4	07-LA-57,60-R5/2R7.3□R36.1/R40.0	RAC (TYPE G)	08-Apr-03	RAC (TYPE G)	470	1,278
11 07-1Y0204	07-LA-5-60.2/68.7	RAC (TYPE G)	05-Jun-03	RAC (TYPE G)	5,100	13,872
12 07-1Y0604	07-LA-14-87.4/88.0	RAC (TYPE G)	29-Jan-03	RAC (TYPE G)	890	2,421
13 07-1Y2204	07-LA-210-R40.6/R74.6	RAC (TYPE G)	17-Jun-03	RAC (TYPE G)	12,200	33,184
14 07-1Y3804	07-Ven-126-27.7/33.1	RAC (TYPE G)	27-May-03	RAC (TYPE G)	3,120	8,486
15 07-1Y3804	07-Ven-126-27.7/33.1	RAC (TYPE O)	27-May-03	RAC (TYPE O)	5,500	14,960
16 08-1A0304	08-SBd-83-R 0/0/4.4	RAC (TYPE G)	17-Apr-03	RAC (TYPE G)	5,420	14,742
17 08-350434	08-SBd-38-16.3/24.0	RAC (TYPE G)	10-Sep-03	RAC (TYPE G)	13,900	37,808
18 10-0A5804	10-Mer-140-43.4/48.6	RAC (WARRANTY)	13-Feb-03	RAC (WARRANTY)	6,804	18,507
19 10-0G6304	10-Mer,SJ-59, 99, 120-Var	RAC (TYPE G)	12-May-03	RAC (TYPE G)	3,590	9,765
20 11-199364	11-Imp-111-R20.9/R35.6	RAC (TYPE G)	19-May-03	RAC (TYPE G)	13,200	35,904
21 11-230104	11-SD-75-17.7/28.0	RAC (WARRANTY)	11-Feb-03	RAC (WARRANTY)	134,000	364,480
22 11-232404	11-Imp-86-43.9/44.6	RAC (TYPE G)	06-Feb-03	RAC (TYPE G)	2,270	6,174
23 11-236204	11-Imp-111-14.2/20.3	RAC (TYPE G)	20-Oct-03	RAC (TYPE G)	5,370	14,606
24 11-241104	11-Imp-86-31.4/33.2 & 60.0/69.7	RAC (TYPE G)	02-May-03	RAC (TYPE G)	2,700	7,344
25 11-241154	11-SD-78-R43.1/57.1	RAC (TYPE G)	16-May-03	RAC (TYPE G)	1,900	5,168
26 11-242004	11-SD-94-R83.7/84.1	RAC (TYPE G)	16-May-03	RAC (TYPE G)	670	1,822
27 12-095414	12-Ora-405-20.3/40.3	RAC (TYPE G)	26-Sep-03	RAC (TYPE G)	550	1,496
28 12-0A4004	12-Ora-5-11.9/13.8	RAC (TYPE G)	22-Apr-03	RAC (TYPE G)	350	952
29 12-0C15U4	12-Ora-5-2.7/11.1	RAC (TYPE G)	05-Aug-03	RAC (TYPE G)	36,600	99,552
30 12-0C15U4	12-Ora-5-2.7/11.1	RAC (TYPE O)	05-Aug-03	RAC (TYPE O)	24,400	66,368
31 12-0F1904	12-Ora-5-48.8/50.5	RAC (TYPE G)	20-May-03	RAC (TYPE G)	4,550	12,376
32 12-0F2004	12-Ora-39-5.3/14.2	RAC (TYPE G)	12-Jun-03	RAC (TYPE G)	11,100	30,192
33 12-0F6204	12-Ora-5-10.9	RAC (TYPE G)	22-Jul-03	RAC (TYPE G)	170	462
					414,160	1,126,515
1 01-316104	01-Men-20-R60.9/69.2	RAC-GAP GRADED (RUMAC-G	25-Aug-04	RAC-GAP GRADED (RUMAC-G	33307	SHOPP/H22
2 01-316104	01-Men-20-R60.9/69.2	RAC (TYPE G)	25-Aug-04	RAC (TYPE G)	390126	SHOPP/201.12
3 01-316104	01-Men-20-R60.9/69.2	RAC (TYPE O)	25-Aug-04	RAC (TYPE O)	390127	SHOPP/201.12
4 02-0C7004	02-Las-36-41.8/R42.8	RAC (TYPE G)	13-May-04	RAC (TYPE G)	390206	Maint/HM1
5 02-0C9004	02-Mod,Sha-299-15.3/27.4,11.6/22.9	A-R BINDER	25-May-04	A-R BINDER	370120	HM1
6 02-387604	02-Sis-5-R25.7/R32.3	RAC (TYPE G)	17-Aug-04	RAC (TYPE G)	390206	SHOPP/201.121
7 03-4C4004	03-Pla-65-R7.8/R14.1	WEED CONTROL (RUBBER M/	22-Jan-04	WEED CONTROL (RUBBER M/	32193	HB1
						1,850

CONTRACT DIST/CORTE/PM	AWARD DATE	ITEM DESCRIPTION	ITEM CODE	PROGRAM	TONNES	TIRES
8 03-3C6904	03-Sac,Yol,Bult-5,50,51,80,99,	191-Var.	07-Apr-04	RAC (TYPE O)	1,150	3,128
9 03-0C1204	03-Sac-5-27,7/28,8		12-Apr-04	RAC (TYPE O)	2,440	6,637
10 03-A6904	03-Pla-80-23,0/53,6		10-Jun-04	RAC (TYPE O)	44,500	121,040
11 03-1A304	03-Yol-80-10,3/R18,2		01-Nov-04	RAC (TYPE O)	4,910	13,355
12 04-0C7804	04-SCI-680-0,0/16,0		02-Jun-04	RAC (TYPE G)	49,300	134,096
13 04-0C7504	04-SCI-101-0,0/R28,3		29-Jun-04	RAC (TYPE G)	27,100	73,712
14 04-0C7104	04-CC-4-41,5/49,9		10-Nov-04	RAC (TYPE G)	9,100	24,752
15 04-0C7704	04-SCI-280-R0,0/R4,4		23-Nov-04	RAC (TYPE G)	24,000	65,280
16 04-2332U4	04-SCI-Ala-880,262-13,2/16,9,R0,0/4,7,R0,0/R0,7		17-Dec-04	RAC (TYPE G)	13,020	35,414
17 04-2024	04-CC-123-0,0/3,5		17-Nov-04	RAC (TYPE G)	7,800	21,216
18 05-Q15604	05-SLQ-41-66,2/70,5		01-Mar-04	A-R BINDER	120	4,400
19 05-Q15504	05-SB-01-R1,0/R2,7 R4,0/31,0		19-May-04	A-R BINDER	1050	38,500
20 06-480304	06-Ker-58-123,9/133,0		08-Mar-04	A-R BINDER	420	15,400
21 06-486004	06-Fre-5-78,2/105,9		12-Apr-04	RAC (TYPE G)	105,300	286,416
22 06-493104	06-Fre-33-67,6/97,4		23-Apr-04	RAC (TYPE G)	9,270	25,214
23 06-496304	06-Ker-119-24,5/29,3		29-Apr-04	RAC (TYPE G)	7,240	19,693
24 06-479904	06-Fre-168-65,0/75,0		13-May-04	RAC (TYPE G)	6,690	18,197
25 06-496504	06-Tul-99-64,8/66,8		13-May-04	RAC (TYPE G)	5,370	14,606
26 06-477704	06-Ker,Kin-5-132,4/140,1,0/0,7,1		18-May-04	RAC (TYPE O)	7,500	20,400
27 06-481104	06-Ker-58-KP R2017,6/R223,6		19-May-04	RAC (TYPE G)	7,360	20,019
28 06-499404	06-Mad-41-40,2/44,9		19-May-04	RAC (TYPE G)	390206	7,779
29 06-489404	06-Ker-155-R97,6/R114,2		25-May-04	A-R BINDER	370120	HM1A
30 06-497704	06-Ker-166-33,9/36,4		28-May-04	RAC (TYPE G)	300	11,000
31 07-4J0904	07-LA-1-40,9/41,2		04-May-04	RAC (TYPE G)	3,270	8,894
32 07-226204	07-LA-5-0,0/18,5		09-Jun-04	RAC (TYPE G)	390126	Minor A/201,12
33 07-1Y1404	07-LA,SBD-71,60-1,9/2,2, 0,0		10-Jun-04	RAC (TYPE G)	390206	SHOPP/201,121
34 07-214304	07-LA-10,10S-28,5/34,6,S0,5/0,6		17-Jun-04	RAC (TYPE G)	390206	Maint/HM1A
35 07-1Y1004	07-LA-57, 210-R1,6/R10,4, R74,5/R76,5		23-Jun-04	RAC (TYPE G)	31,300	85,136
36 07-1Y3404	07-LA-110-25,7/33,3		24-Jun-04	RAC (TYPE G)	390126	Maint/HM1A
37 07-1Y4004	07-LA-5-24,7/26,6		24-Jun-04	RAC (TYPE G)	3,060	8,323
38 07-1Y3004	07-LA-47-L0,0/1,2		29-Jun-04	RAC (TYPE G)	390126	Maint/HM1B
39 07-194504	07-Ven-1-0,0/15,1		01-Dec-04	RAC (TYPE G)	650	1,768
40 07-207304	07-LA-66-0,0/4,1		15-Oct-04	RAC (TYPE G)	1,600	4,352
41 07-213704	07-LA-2-23,0/37,6		29-Oct-04	RAC (TYPE G)	29,000	78,880
42 08-0E1704	08-SBd-62-50,2/52,8		05-May-04	RAC (TYPE O)	450	1,224
43 08-1A0804	08-SBd-18-141,3/155,1		11-May-04	RAC (TYPE O)	2,660	7,235
44 08-0E0504	08-SBd-2-6,4/10,3		19-May-04	A-R BINDER	3,800	10,386
45 08-478804	08-Riv-215-44,1/61,3		25-May-04	RAC (TYPE G)	17,300	47,056
46 08-0A1B04	08-SBd-10-R0,0/R14,8		23-Jun-04	RAC (TYPE G)	164	6,013
47 08-0E0404	08-Riv-371-98,2/111,0		21-Oct-04	RAC (TYPE O)	75,300	204,816
48 10-0J0104	10-SJ-99-36,9/46,0		23-Apr-04	RAC (TYPE O)	1,600	4,352
					7,930	21,570
					9,580	26,058

CONTRACT DIST/CORTE/PM	AWARD DATE	ITEM DESCRIPTION	ITEM CODE	PROGRAM	TONNES	TIRES
49 10-4228304	10-Mpa-140-24.9/30.4	01-Jun-04 RAC (TYPE G)	390206 SHOPP/201.12		6,040	16,429
50 10-0A6724	10-SJ-5-39.4, 41.1	05-Oct-04 RAC (TYPE G)	390206 SHOPP/HAA22		2,590	7,045
51 10-1A4904	10-Ama-16-0/15.1	16-Nov-04 RAC (TYPE G)	390126 SHOPP/HAA22		15,000	40,800
52 11-2238904	11-SD-5-R23.3/R24.6	29-Jun-04 RAC (TYPE G)	390126 SHOPP/201.121		3,520	9,574
53 11-077304	11-SD-15-M21.0/R82.0	23-Sep-04 RAC (TYPE G)	390206 SHOPP/201.121		22,600	61,472
54 11-207914	11-SD-5, 163-R25.7/R26.7, 1.0/6.4	15-Nov-04 RAC (TYPE G)	390206 SHOPP/HAA22		9,090	24,725
55 11-241184	11-SD-67-R6.3/R29.8	28-Dec-04 RAC (TYPE O)	390207 Maint/HM1A		15,100	41,072
56 12-0F6004	12-Ora-37,90-31.6/32.0,8.3/8.5	02-Jan-04 RAC (TYPE G)	390126 SHOPP/201.01		530	1,442
				TOTAL	660,404	1,889,942
1 01-452504	01-Hun-36-0.5/21.6	01-Feb-05 A-R BINDER	370120 SHOPP/20.80.010		500	18,335
2 01-457904	01-Mar-128-16.6/28.8	12-May-05 A-R BINDER	370120 SHOPP/20.80.010		270	9,901
3 02-1C9304	02-Las-395-214.0/223.7	09-Mar-05 A-R BINDER	370120 SHOPP/20.80.010		240	8,801
4 02-1C8004	02-Las-139-0/1.0	27-May-05 RAC (TYPE G)	390206 SHOPP/20.80.010.010		1,510	4,107
5 02-387404	02-Mod-395-37.5/99.1	7-Sep-05 RAC (TYPE G)	390195 SHOPP/201.121		51,600	140,352
6 03-2N ¹ /904	03-Sac-5, 99-47.6/49.0, R51.7/59.3	11-May-05 RAC (TYPE O)	390207 SHOPP/20.80.010		14,800	40,256
7 04-0C3804	04-Ala-24-R2.9/R10.0	10-May-05 RAC (TYPE G)	390206 SHOPP/201.010		1,800	4,896
8 04-0C6804	04-Ala-24-R2.9/R10.0	10-May-05 RAC (TYPE O)	390207 SHOPP/201.010		8,370	22,766
9 04-0C7604	04-SCI-152-35.3/48.9	7-Sep-05 RAC (TYPE G)	390206 SHOPP/201.122		39,700	107,984
10 05-0Aa4004	05-SB,SLO-33-0/13.2, -0.0/8.0	23-Feb-05 RAC (TYPE G)	390126 SHOPP/201.120		29,100	79,152
11 05-0Aa4004	05-SB,SLO-33-0/13.2, 0.0/8.0	23-Feb-05 RAC (TYPE O)	390127 SHOPP/201.120		10,200	27,744
12 06-0C3304	06-Kin-5-0/16.1	01-Jun-05 RAC (TYPE O-HB)	34158 SHOPP/20.80.010.010		12,200	33,184
13 06-0C3604	06-Ker-223-34.1/51.4	01-Apr-05 RAC (TYPE O)	390127 SHOPP/20.80.010.010		8,080	21,978
14 06-0C4304	06-Ker-58-R207.6/R219.5, R223.7/R231.4	28-Mar-05 RAC (TYPE G)	390206 SHOPP/20.80.010.010		11,200	30,464
15 06-33 ² 304	06-Tui-198-34.6/42.9	04-Mar-05 RAC (TYPE G)	390206 SHOPP/201.120		16,000	43,520
16 06-44 ³ 004	06-Tui-63-31.9/R 48.4	19-May-05 RAC (TYPE G)	390206 SHOPP/201.121		17,500	47,600
17 06-44 ⁴ 004	06-Tui-63-31.9/R 48.4	19-May-05 RAC (TYPE O)	390127 SHOPP/201.121		3,190	8,677
18 06-48 ⁵ 004	06-Ker-58-219.5/231.4	23-May-05 RAC (TYPE G)	390126 SHOPP/201.121		5,910	16,075
19 06-49 ⁶ 504	06-Tui-99, 201-67.6/75.6, 27.4/33.5	14-Feb-05 RAC (TYPE G)	390126 SHOPP/20.80.010.010		11,800	32,096
20 06-49 ⁷ 504	06-Tui-99, 201-67.6/75.6, 27.4/33.5	14-Feb-05 RAC (TYPE O)	390127 SHOPP/20.80.010.010		3,410	9,275
21 07-1Y ⁸ 004	07-LA-5-0/08.5	24-Mar-05 RAC (TYPE G)	390126 SHOPP/20.80.010.010		2,230	6,064
22 07-1Y2714	07-Ven-33-33.4/41.5, 47.7/62.8	14-Apr-05 RAC (TYPE G)	390206 SHOPP/20.80.010.010		4,490	12,213
23 07-1Y ⁹ 304	07-Ven-150-52.5/54.6	25-Mar-05 RAC (TYPE G)	390126 SHOPP/20.80.010.010		4,950	13,464
24 07-1Y ¹⁰ 04	07-LA-10-62.6/68.2	02-Mar-05 RAC (TYPE G)	390206 STIP		400	1,088
25 07-1Y5704	07-LA-405-0.7/12.6	03-Jun-05 RAC (TYPE G)	390206 SHOPP/201.121		2,290	6,229
26 07-1Y ¹¹ 304	07-LA-138-40.3/48.3	25-Mar-05 RAC (TYPE G)	390206 SHOPP/201.121		21,400	58,208
27 07-201204	07-LA-405-62.3/63.2	30-Mar-05 RAC (TYPE G)	390206 SHOPP/201.121		11,600	31,552
28 07-206304	07-LA-60-R11.0/31.3					
29 07-211104	07-Ven-118-0.8/17.2					
30 07-214404	07-Ven-118-18.1/25.8					

CONTRACT DIST/COR/TE/PM	AWARD DATE	ITEM DESCRIPTION	ITEM CODE	PROGRAM	TONNES	TIRES
31 07-244804	07-LA-101-12.0/19.2	RAC (TYPE G)	390206	SHOPP/201.121	32,300	87,856
32 07-2470304	07-LA-71-R14/2.6	RAC (TYPE G)	390206	SHOPP/20.80.010.010	2,760	7,507
33 07-244904	07-Ven-126-0/021.9	RAC (TYPE G)	390126	SHOPP/201.121	3,910	10,635
34 07-2074J4	07-LA-27-0/017.8	RAC (TYPE G)	390206	SHOPP/20.80.010.010	19,200	52,224
35 08-1A1404	08-SBd-247-0/8/13.2	A-R BINDER	370120	SHOPP/20.80.010.010	480	17,602
36 08-0F4604	08-Riv-79-R14.5/R24.1 (KP)	A-R BINDER	370120	SHOPP/20.80.010.010	200	7,334
37 08-0E0304	08-Riv-79-0/0/3.7	RAC (TYPE O)	390207	SHOPP/20.80.010.010	2,160	5,875
38 08-0E604	08-SBd-18-T10.1/R18	RAC (TYPE O)	390207	SHOPP/20.80.010.010	11,000	29,920
39 08-0E504	08-Riv-80-35.4/41.8	RAC (TYPE G)	390126	SHOPP/20.80.010.010	6,930	18,850
40 08-0E504	08-SBd-247-var	RAC (TYPE G)	390126	SHOPP/201.130	45,500	123,760
41 08-0F2004	08-SBd-95-115.8/129.5	RAC (TYPE G)	390126	SHOPP/20.80.010.010	7,910	21,515
42 08-0F4404	08-SBd-18-156.9/162.5	RAC (TYPE O)	390207	SHOPP/20.80.010.010	5,890	16,021
43 08-0F4704	08-Riv-111-T85.3/90.4	RAC (TYPE O)	390207	SHOPP/20.80.010.010	6,900	18,768
44 08-0F4804	08-Riv-15.60-83.1/83.6. 0/0/11.3	RAC (TYPE G)	390126	SHOPP/20.80.010.010	800	2,176
45 08-356444	08-SBd-38-R8.2/14.7	RAC (TYPE G)	390126	SHOPP/201.122	7,460	20,291
46 09-320264	09-Mn0-395-20.3/58.1	A-R BINDER	370120	SHOPP/20.80.010.010	930	34,103
47 09-328304	09-Kar-14.395-74.3/81.7. 11.2/19.3	RAC (TYPE O)	390127	SHOPP/20.80.010.010	8,230	22,386
48 09-330304	09-Mn0-395-71.6/81.4. 93.5/112.5	A-R BINDER	370120	SHOPP/20.80.010.010	1,250	45,838
49 09-295504	09-Iny-395-0.0/R13.8	RAC (TYPE G)	390206	SHOPP/201.120	49,700	135,184
50 09-301804	09-Mn0-395-58.1/72.5.135.7/149.7	RAC (TYPE G)	390126	SHOPP/201.122	25,500	69,360
51 10-0U9704	10-Mer-165-49.2/58.6	RAC (TYPE O)	390127	SHOPP/20.80.010	2,010	5,467
52 10-0M2704	10-Su-5-0.5/R22.3	RAC (TYPE O)	390207	SHOPP/20.80.010	8,250	22,440
53 10-0M3004	10-Su-4-32.3/40.2	RAC (TYPE O)	390127	SHOPP/20.80.010.010	4,640	12,621
54 10-34804	10-Mer.Mad-152-36.7/R65.7. R0.0/R0.4	RAC (TYPE G)	390126	SHOPP/201.121	6,450	17,544
55 11-236304	11-SD-54-T19.6/T22.9□	RAC (TYPE G)	390206	SHOPP/201.122	8,090	22,005
56 11-235504	11-ImP-86-69.7/109.1	RAC (TYPE G)	390206	SHOPP/201.120	98,500	267,920
57 12-0G004	12-Ora-1-31.8/38.2	RAC (TYPE G)	390126	SHOPP/20.80.010.010	14,000	38,080
58 12-0G0014	12-Ora-1-33.13.5/16.3	RAC (TYPE G)	390206	SHOPP/20.80.010	3,350	9,112
59 12-0G6504	12-Ora-1-32.8	RAC (TYPE G)	390126	SHOPP/20.80.010	74	201
TOTAL						693,914 2,018,833





*Projected through year end. Values based on information through first three quarters
RAC percentage determined by comparing RAC to all flexible pavements, by weight.